

ABSTRACT OF DISCLOSURE

A cathode active material is prepared by mixing a transition metal compound and a lithium compound in a molar ratio of 1:1.0-1:1.2 and thermally treating the mixture while supplying CO₂ and O₂ in a ratio of partial pressures ranging from 1:0.001-1:1,000, and a lithium battery utilizes the cathode active material. The lithium battery ensures safety against over-charging because an overflow of current may be effectively cut off without reducing discharging capacity and cycle life characteristics.